An ultracold, optically trapped mixture of 87Rb and metastable 4He atoms

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List of Publications

As chapter (or part) of this thesis:

A.S. Flores, H.P. Mishra, W. Vassen, and S. Knoop. "An ultracold, optically trapped mixture of ^{87}Rb and metastable ^{4}He atoms." *European Physical Journal D*, 71: 49, 2017.

A.S. Flores, W. Vassen, and S. Knoop. "Quantum-state-controlled Penning-ionization reactions between ultracold alkali-metal and metastable helium atoms." *Physical Review A*, 94: 050701(R), 2016.

A.S. Flores, H.P. Mishra, W. Vassen, and S. Knoop. "Simple method for producing Bose-Einstein condensates of metastable helium using a single-beam optical dipole trap." *Applied Physics B*, 121: 391, 2015.

H.P. Mishra, A.S. Flores, W. Vassen, and S. Knoop. "Efficient production of an ^{87}Rb F=2, m_F=2 Bose-Einstein condensate in a hybrid trap." *European Physical Journal D*, 69: 52, 2015.

S. Knoop, P.S. Żuchowski, D. Kędziera, Ł. Mentel, M. Puchalski, H.P. Mishra, A.S. Flores, and W. Vassen. "Ultracold mixtures of metastable He and Rb: Scattering lengths from *ab initio* calculations and thermalization measurements." *Physical Review A*, 90: 022709, 2014.

Co-authored paper but not part of this thesis:

F.M.J. Cozijn, J. Biesheuvel, A.S. Flores, W. Ubachs, G. Blume, A. Wicht, K. Paschke, G. Erbert, and J.C.J. Koelemeij. "Laser cooling of beryllium ions using a frequency-doubled 626 nm diode laser." *Optics Letters*, 38: 2370, 2013.